

## CLAIMS

What is claimed is:

1. A method facilitating the configuration of parameters controlling utilization of a network resource, comprising the steps of:

5 monitoring utilization of a network resource with respect to a plurality of utilization classes;

displaying the most significant utilization classes based on a network statistic;

and,

facilitating association of a displayed utilization class with a control parameter

10 operative to control utilization of the network resource.

2. The method of claim 1 further comprising the step of:

facilitating selection of additional utilization classes not presented in the displaying step and association of control parameters to the additional utilization

15 classes.

3. The method of claim 1 wherein the facilitating step comprises the steps of

providing a user interface allowing for selection of a displayed utilization class and a desired control parameter.

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4. The method of claim 2 wherein the facilitating step comprises the steps of

providing a user interface allowing for selection of a displayed utilization class and a desired control parameter; and

wherein the user interface allows for selection of additional utilization classes  
25 and configuration of desired allocations of the network resource for selected additional utilization classes.

5. The method of claim 1 further comprising the step of

upon selection by a user, associating a selected utilization class with control  
30 parameter selected by the user.

6. The method of claim 1 wherein the displaying step further comprises  
providing a user interface that displays the most significant utilization classes  
based on a utilization statistic;
- 5 wherein the user interface allows for selection of a displayed utilization class  
and a desired control parameter.
7. The method of claim 6 wherein the user interface further allows for selection of  
additional utilization classes not presented in the displaying step and configuration of  
10 desired control parameters for selected additional utilization classes.
8. The method of claim 1 wherein the most significant utilization classes are  
displayed in an order relative to corresponding values of the network statistic.
- 15 9. The method of claim 1 wherein the most significant utilization classes are  
displayed in descending order relative to corresponding values of the network  
statistic.
10. The method of claim 1 wherein the most significant utilization classes are  
20 displayed in ascending order relative to corresponding values of the network  
statistic.
11. The method of claim 6 wherein the user interface displays the most significant  
utilization classes in an order relative to corresponding values of the network  
25 statistic.
12. The method of claim 6 wherein the user interface displays the most significant  
utilization classes in descending order relative to corresponding values of the network  
statistic.
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13. The method of claim 6 wherein the user interface displays the most significant utilization classes in ascending order relative to corresponding values of the network statistic.

5 14. The method of claim 1 further comprising the steps of  
providing a set of selectable network statistics;  
receiving a selected utilization statistic from a user; and,  
wherein the displaying step comprises  
displaying the most significant utilization classes based on the selected  
10 network statistic.

15. The method of claim 3 wherein the user interface displays a predefined set of control parameters selectable by a user.

15 16. The method of claim 1 wherein the network statistic is a utilization statistic.

17. The method of claim 1 wherein the network statistic is computed over a given analysis interval; and wherein the method further comprises the steps of:  
allowing for selection of an analysis interval.

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18. A method facilitating the configuration of bandwidth management parameters, comprising the step of:  
monitoring bandwidth utilization with respect to a plurality of traffic classes;  
displaying the most significant traffic classes based on a network statistic; and,  
25 facilitating association of a displayed traffic class with a bandwidth utilization control.

19. The method of claim 18 further comprising the step of:

facilitating selection of additional traffic classes not presented in the displaying step and association of bandwidth utilization controls to the additional traffic classes.

5 20. The method of claim 18 wherein the facilitating step comprises the step of displaying a predefined set of selectable bandwidth control categories; wherein each bandwidth control category maps to a set of bandwidth utilization controls.

21. The method of claim 18 wherein the bandwidth utilization control is implemented  
10 by an aggregate data flow bandwidth utilization control.

22. The method of claim 18 wherein the bandwidth utilization control is implemented by a per-flow bandwidth utilization control.

15 23. The method of claim 18 wherein the bandwidth utilization control is implemented by at least one aggregate data flow bandwidth utilization control and at least one per-flow bandwidth utilization control.

24. The method of claim 18 wherein the monitoring step further comprises the step  
20 of automatically creating new traffic classes in response to data flows.

25 25. The method of claim 18 wherein the network statistic is computed over a given analysis interval; and wherein the method further comprises the steps of:  
allowing for selection of an analysis interval.

26. An apparatus allowing for the management of bandwidth utilization across an access link, comprising:  
a traffic discovery engine operative to identify traffic classes corresponding to  
30 data flows traversing an access link; wherein the traffic discovery engine is further

operative to measure bandwidth utilization across the access link with respect to a plurality of traffic classes in relation to at least one bandwidth utilization statistic;

a bandwidth control mechanism operative to enforce bandwidth utilization controls on data flows associated with corresponding traffic classes; and

5 a user interface module operative to display the most significant traffic classes based on a bandwidth utilization statistic; and wherein the user interface module facilitates association of a bandwidth utilization control to a selected traffic class.

27. The apparatus of claim 26 wherein the bandwidth utilization statistic is  
10 selectable by a user.

28. The apparatus of claim 26 wherein the bandwidth utilization statistic is computed over an analysis interval.

15 29. The apparatus of claim 28 wherein the analysis interval is selectable by a user.

30. The apparatus of claim 26 wherein the traffic discovery engine is further operative to create new traffic classes in response to data flows.

20 31. The apparatus of claim 26 wherein the user interface allows for the display of additional traffic classes.